

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for ~~configuring~~ accessing data objects from a data
repository from ~~to~~ a plurality of data repositories, ~~the data repositories that~~ each
~~providing~~ comprises a plurality of data objects, the method comprising:
receiving a request to access data objects stored in a specified one of the plurality of
data repositories, the request including a parameter that specifies the data
objects;
wherein at least two of the plurality of data repositories are configured with different
data objects and data object relationships;
identifying, based on the parameter, metadata that characterizes at least a portion of
the data objects in the specified data repository, from a plurality of metadata
that each characterizes a configuration for the data objects in a data repository;
retrieving the metadata that characterizes at least a portion of the plurality of data
objects in ~~each~~ the specified data repository; ~~and~~
generating, based on the metadata that characterizes at least a portion of the plurality
of data objects in the specified data repository, a reconfigured request to
access the data objects stored in the specified data repository; and
using the reconfigured request, signaling a selection for one or more data objects from
the plurality of data repositories specified data repository based on the
parameter in the request and the metadata.

2. (canceled)

3. (canceled)

4. (canceled)

5. (currently amended) The method of claim 1,
~~wherein retrieving metadata includes identifying metadata from the request that characterizes~~
~~a configuration for data objects in each data repository, wherein the configuration of~~
~~each data repository indicates a relationship amongst at least a portion of the data~~
~~objects in the plurality of data objects of each data repository, and wherein the~~
~~configuration for at least some of the data repositories are different; and~~
wherein signaling a selection for one or more data objects from the plurality of data
repositories specified data repository includes:
~~generating a reconfigured request for each data repository in the plurality of data~~
~~repositories, each reconfigured request being generated using metadata that~~
~~characterizes the configuration of that data repository, and~~
modifying the selected one or more data objects from the plurality of data repositories
specified data repository using the reconfigured request[[s]].

6. (currently amended) The method of claim 1,
~~wherein retrieving metadata includes identifying metadata from the request that characterizes~~
~~a configuration for data objects in each data repository, wherein the configuration of~~
~~each data repository indicates a relationship amongst at least a portion of the data~~
~~objects in the plurality of data objects of each data repository, and wherein the~~
~~configuration for at least some of the data repositories are different; and~~
wherein signaling a selection for one or more data objects from plurality of data repositories
specified data repository includes:

9 ~~generating a reconfigured request for each data repository in the plurality of data~~
10 ~~repositories, each reconfigured request being generated using metadata that~~
11 ~~characterizes the configuration of that data repository; and~~
12 deleting the selected one or more data objects from the ~~plurality of data repositories~~
13 specified data repository using the reconfigured request[[s]].

1 7. (currently amended) The method of claim 1,
2 ~~wherein retrieving metadata includes identifying metadata from the request that characterizes~~
3 ~~a configuration for data objects in each data repository, wherein the configuration of~~
4 ~~each data repository indicates a relationship amongst at least a portion of the data~~
5 ~~objects in the plurality of data objects of each data repository, and wherein the~~
6 ~~configuration for at least some of the data repositories are different; and~~
7 wherein signaling a selection for one or more data objects from the ~~plurality of data~~
8 ~~repositories~~ specified data repository includes:
9 ~~generating a reconfigured request for each data repository in the plurality of data~~
10 ~~repositories, each reconfigured request being generated using metadata that~~
11 ~~characterizes the configuration of that data repository; and~~
12 creating one or more data objects using the reconfigured request, the data objects
13 being created in ~~plurality of data repositories~~ the specified data repository
14 according to the configuration for the data objects in ~~that the specified data~~
15 repository.

1 8. (original) The method of claim 1, wherein identifying metadata based on the
2 parameter in the request includes accessing a storage medium to retrieve metadata
3 specified by the parameter in the request.

1 9. (currently amended) The method of claim 1, wherein retrieving metadata includes
2 identifying, from the request, metadata ~~from the request~~ that characterizes a
3 configuration for data objects in each data repository, the configuration of each data
4 repository indicating a class of data objects in each data repository that share an
5 attribute.

1 10. (currently amended) The method of claim 1, wherein retrieving metadata includes
2 identifying, from the request, metadata ~~from the request~~ that characterizes a
3 configuration for data objects in each data repository, the configuration of each data
4 repository indicating an auxiliary class of data objects.

1 11. (currently amended) The method of claim 1,
2 wherein retrieving metadata includes identifying a metadata structure from the request that
3 identifies a plurality of auxiliary classes for each data repository; and
4 wherein signaling a selection for one or more data objects ~~from the plurality of data~~
5 ~~repositories~~ includes determining whether the parameter is a valid feature of at least
6 one of the plurality of auxiliary classes.

1 12. (currently amended) The method of claim 1, further comprising:
2 identifying one or more auxiliary classes for each data repository, each auxiliary class
3 including at least one data object having an attribute and a value for that attribute, the

value for that attribute further being modified by an auxiliary value that can only be associated with the attribute by modifying the value of that attribute; and associating a metadata structure with each auxiliary class; wherein retrieving metadata includes identifying the metadata structure from the request that identifies the one or more auxiliary classes for each data repository; and wherein signaling a selection includes signaling a selection for one or more data objects from the plurality of data repositories includ[[es]]ing determining whether the parameter is valid for the attribute, the value for the attribute, or the auxiliary value for the attribute.

13. (currently amended) The method of claim 1, wherein retrieving metadata includes identifying, from the request, metadata ~~from the request~~ that characterizes a configuration for data objects in each data repository, the configuration of each data repository indicating select data objects of each data repository that are linked to other data objects.

14. (currently amended) The method of claim 1, wherein retrieving metadata includes identifying, from the request, metadata ~~from the request~~ that identifies a plurality of linked data objects for each data repository, each of the plurality of linked data objects referencing another data object in the data repository; and wherein the method further includes associating the metadata structure with the plurality of linked data objects.

15. (currently amended) The method of claim 1,

2 wherein retrieving metadata includes identifying, from the request, a metadata structure ~~from~~
3 ~~the request~~ that identifies a plurality of linked data objects for each data repository,
4 each linked data object referencing a counterpart data object in the data repository;
5 and
6 wherein signaling a selection ~~for one or more data objects from the plurality of data~~
7 ~~repositories using the metadata structure~~ includes signaling a selection for one or
8 more linked data objects, and using the metadata structure to identify the counterpart
9 data object referenced by each linked data object.

1 16. (currently amended) The method of claim 1,
2 wherein retrieving metadata includes, from the request, a metadata structure ~~from the request~~
3 that identifies an inheritable attribute for a plurality of data objects in at least one of
4 the plurality of data repositories, the inheritable attribute being located in at least one
5 superior data object; and
6 wherein signaling a selection ~~for one or more data objects from the plurality of data~~
7 ~~repositories~~ includes determining that the parameter specifies the inheritable attribute,
8 and selecting a class of data objects that share the inheritable attribute.

1 17. (currently amended) A computer system coupleable to an application and to a
2 plurality of data repositories, the application signaling the computer system a request
3 to access a plurality of data objects from a particular data repository of the plurality of
4 data repositories, the computer system comprising:

5 a storage medium that stores ~~at least a first~~ a plurality of metadata structures that each
6 characterizes a configuration of, ~~the first metadata structure characterizing~~ multiple
7 data objects in ~~each~~ a respective data repository; and
8 a processing resource that is configured to identify and use ~~the~~ a first metadata structure from
9 the plurality of metadata structures to select one or more data objects from the
10 ~~plurality of data repositories~~ particular data repository in response to an application
11 request to access data objects from ~~a~~ the particular data repository.

1 18. (original) The computer system of claim 17, wherein the metadata structure
2 characterizes, for each data repository, a configuration for how select data objects
3 relate to other data objects in the plurality of data objects of that data repository.

1 19. (original) The computer system of claim 17, wherein the first metadata structure
2 includes a plurality of metadata items, and wherein the processing resource identifies
3 a parameter in the request, uses the parameter to identify a first metadata item in the
4 first metadata structure, and selects the one or more data objects using the first
5 metadata item.

1 20. (original) The computer system of claim 17, wherein the metadata structure includes
2 a plurality of metadata items, and wherein the processing resource identifies a
3 parameter in the request, uses the parameter to identify a first metadata item in the
4 metadata structure, selects the one or more data objects using the first metadata item,
5 and performs an operation specified in the request to access the data repositories on
6 the selected one or more data objects.

1 21. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies data objects in each data repository that are linked to other data objects.

1 22. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies one or more linked data objects in the data repositories, the linked data
3 objects referencing other data objects in the data repository, and wherein the first
4 metadata structure identifies the other data objects references by the linked data
5 objects.

1 23. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies one or more linked data objects in the data repositories, the linked data
3 objects referencing other data objects in the data repository, and wherein the first
4 metadata structure identifies the other data objects references by the linked data
5 objects, and wherein the processing resources identify an operation from the request
6 to access the plurality of data repositories, and wherein the processing resources
7 implement that operation on the linked data objects and the other data objects that
8 reference the linked data objects.

1 24. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies an auxiliary class of data objects in the plurality of data objects of each data
3 repository, the auxiliary class of data objects including an auxiliary characteristic that
4 modifies and is dependent on another characteristic of a data object in the auxiliary
5 class of data objects.

1 25. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies an auxiliary class of data objects in the plurality of data objects of each data
3 repository, the auxiliary class of data objects including an auxiliary characteristic that
4 modifies and is dependent on another characteristic of a data object in the auxiliary
5 class of data objects, and wherein the processing resource identifies a parameter in the
6 request, uses the parameter to identify the auxiliary class for one or more of the data
7 repositories, and selects the one or more data objects that are in the auxiliary class.

1 26. (original) The computer system of claim 17, The computer system of claim 10,
2 wherein the first metadata structure identifies an auxiliary class of data objects in the
3 plurality of data objects of each data repository, the auxiliary class of data objects
4 including an auxiliary characteristic that modifies and is dependent on another
5 characteristic of a data object in the auxiliary class of data objects, and wherein the
6 processing resource identifies a parameter in the request, uses the parameter to
7 identify the auxiliary class for one or more of the data repositories, selects the one or
8 more data objects that are in the auxiliary class, and performs an operation identified
9 by the request to access the data repositories on the one or more data objects in the
10 auxiliary class.

1 27. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies an inheritable attribute shared by data objects in an object class of each data
3 repository.

1 28. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies an inheritable attribute shared by data objects in an object class, and
3 wherein the first metadata structure identifies a superior data object class and a
4 subordinate object class for the object class having the inheritable attribute.

1 29. (original) The computer system of claim 17, wherein the first metadata structure
2 identifies an inheritable attribute shared by data objects in an object class, and
3 identifies a superior data object and a subordinate object class for the object class
4 having the inheritable attribute, and wherein the processing resources are configured
5 to identify the inheritable attribute from the request, to identify an operation specified
6 in the request, to identify the object class having the inheritable attribute, and to apply
7 the operation to the object class having the inheritable attribute.

1 30. (currently amended) A computer-readable medium carrying sequences of instructions
2 for ~~configuring~~ accessing data objects from a data repository from to a plurality of
3 data repositories that provide a plurality of data objects, the sequences of instructions
4 including instructions for performing the steps of:
5 receiving a request to access data objects stored in a specified one of the plurality of
6 data repositories, the request including a parameter that specifies the data
7 objects;
8 wherein at least two of the plurality of data repositories are configured with different
9 data objects and data object relationships;

10 identifying, based on the parameter, metadata that characterizes at least a portion of
11 the data objects in the specified data repository, from a plurality of metadata
12 that each characterizes a configuration for the data objects in a data repository;
13 retrieving the metadata that characterizes at least a portion of the plurality of data
14 objects in ~~each~~ the specified data repository; and
15 generating, based on the metadata that characterizes at least a portion of the plurality
16 of data objects in the specified data repository, a reconfigured request to
17 access the data objects stored in the specified data repository; and
18 using the reconfigured request, signaling a selection for one or more data objects from
19 the plurality of data repositories specified data repository based on the
20 parameter in the request and the metadata.

1 31. (canceled)

1 32. (canceled)

1 33. (canceled)

1 34. (currently amended) The computer medium of claim 30, further comprising

2 instructions for performing the steps of:

3 ~~identifying metadata from the request that characterizes a configuration for data objects in~~
4 ~~each data repository, wherein the configuration of each data repository indicates a~~
5 ~~relationship amongst at least a portion of the data objects in the plurality of data~~
6 ~~objects of each data repository, and wherein the configuration for at least some of the~~
7 ~~data repositories are different; and~~

8 ~~generating a reconfigured request for each data repository in the plurality of data repositories,~~
9 ~~each reconfigured request being generated using metadata that characterizes the~~
10 ~~configuration of that data repository, and~~
11 modifying the selected one or more data objects from the plurality of data repositories
12 specified data repository using the reconfigured request[[s]].

1 35. (currently amended) The computer-readable medium of claim 30, further comprising
2 instructions for performing the steps of:
3 ~~identifying metadata from the request that characterizes a configuration for data objects in~~
4 ~~each data repository, wherein the configuration of each data repository indicates a~~
5 ~~relationship amongst at least a portion of the data objects in the plurality of data~~
6 ~~objects of each data repository, and wherein the configuration for at least some of the~~
7 ~~data repositories are different; and~~
8 ~~generating a reconfigured request for each data repository in the plurality of data repositories,~~
9 ~~each reconfigured request being generated using metadata that characterizes the~~
10 ~~configuration of that data repository; and~~
11 deleting the selected one or more data objects from the plurality of data repositories specified
12 data repository using the reconfigured request[[s]].

1 36. (currently amended) The computer-readable medium of claim 30, further comprising
2 instructions for performing the steps of:
3 ~~identifying metadata from the request that characterizes a configuration for data objects in~~
4 ~~each data repository, wherein the configuration of each data repository indicates a~~
5 ~~relationship amongst at least a portion of the data objects in the plurality of data~~

6 ~~objects of each data repository, and wherein the configuration for at least some of the~~
7 ~~data repositories are different; and~~
8 ~~generating a reconfigured request for each data repository in the plurality of data repositories,~~
9 ~~each reconfigured request being generated using metadata that characterizes the~~
10 ~~configuration of that data repository, and~~
11 creating one or more data objects using the reconfigured request, the data objects being
12 created in ~~plurality of data repositories~~ the specified data repository according to the
13 configuration for the data objects in ~~that~~ the specified data repository.

1 37. (currently amended) A computer system for ~~configuring~~ accessing data objects
2 from a data repository from ~~to~~ a plurality of data repositories that provide a
3 plurality of data objects, the computer system comprising:
4 means for receiving a request to access data objects stored in a specified one of
5 the plurality of data repositories, the request including a parameter that
6 specifies the data objects;
7 wherein at least two of the plurality of data repositories are configured with
8 different data objects and data object relationships;
9 means for identifying, based on the parameter, metadata that characterizes at least
10 a portion of the data objects in the specified data repository, from a
11 plurality of metadata that each characterizes a configuration for the data
12 objects in a data repository;
13 means for retrieving the metadata that characterizes at least a portion of the
14 plurality of data objects in ~~each~~ the specified data repository; ~~and~~

15 means for generating, based on the metadata that characterizes at least a portion of
16 the plurality of data objects in the specified data repository, a reconfigured
17 request to access the data objects stored in the specified data repository;
18 and
19 means for using the reconfigured request to signal[[ing]] a selection for one or
20 more data objects from the ~~plurality of data repositories~~ specified data
21 repository based on the parameter in the request and the metadata.

1 38. (new) The method of claim 1, wherein the plurality of data repositories store
2 hierarchical directories of data objects.

1 39. (new) The method of claim 38, wherein the hierarchical directories are accessible
2 using the Lightweight Directory Access Protocol (LDAP).

1 40. (new) The computer-readable medium of claim 30, wherein the plurality of data
2 repositories store hierarchical directories of data objects.

1 41. (new) The computer-readable medium of claim 40, wherein the hierarchical
2 directories are accessible using the Lightweight Directory Access Protocol
3 (LDAP).

1 42. (new) A system comprising:
2 a network interface that is coupled to a network for receiving one or more packet
3 flows therefrom;
4 a processor;

5 one or more stored sequences of instructions which, when executed by the processor,
6 cause the processor to perform
7 receiving a request to access data objects stored in a specified one of a
8 plurality of data repositories, the request including a parameter that
9 specifies the data objects;
10 wherein at least two of the plurality of data repositories are configured with
11 different data objects and data object relationships;
12 identifying, based on the parameter, metadata that characterizes at least a
13 portion of the data objects in the specified data repository, from a
14 plurality of metadata that each characterizes a configuration for the
15 data objects in a data repository;
16 retrieving the metadata that characterizes at least a portion of the plurality of
17 data objects in the specified data repository;
18 generating, based on the metadata that characterizes at least a portion of the
19 plurality of data objects in the specified data repository, a reconfigured
20 request to access the data objects stored in the specified data
21 repository; and
22 using the reconfigured request, signaling a selection for one or more data
23 objects from the specified data repository.

1 43. (new) A method for accessing a plurality of data repositories that each comprises
2 a plurality of data objects, the method comprising:

3 receiving a request to access data objects stored in data repositories, the request
4 including a parameter that specifies the data objects, wherein at least two
5 of the plurality of directories are configured with different semantics,
6 syntax, and data object relationships;
7 identifying, based on the parameter, a plurality of metadata that each characterizes
8 at least a portion of a configuration for the data objects in respective data
9 repositories;
10 retrieving the plurality of metadata;
11 creating, based on the plurality of metadata, reconfigured requests to access the
12 data objects stored in the respective data repositories;
13 using the reconfigured requests to signal a selection for the data objects from the
14 respective data repositories.

1 44. (new) The method of claim 43, wherein the plurality of data repositories store
2 hierarchical directories of data objects.

1 45. (new) A computer-readable medium carrying sequences of instructions for
2 accessing a plurality of data repositories that each comprises a plurality of data
3 objects, the sequences of instructions which, when executed, cause one or more
4 processors to perform the steps of:
5 receiving a request to access data objects stored in data repositories, the request
6 including a parameter that specifies the data objects, wherein at least two
7 of the plurality of directories are configured with different semantics,
8 syntax, and data object relationships;

9 identifying, based on the parameter, a plurality of metadata that each characterizes
10 at least a portion of a configuration for the data objects in respective data
11 repositories;
12 retrieving the plurality of metadata;
13 creating, based on the plurality of metadata, reconfigured requests to access the
14 data objects stored in the respective data repositories;
15 using the reconfigured requests to signal a selection for the data objects from the
16 respective data repositories.